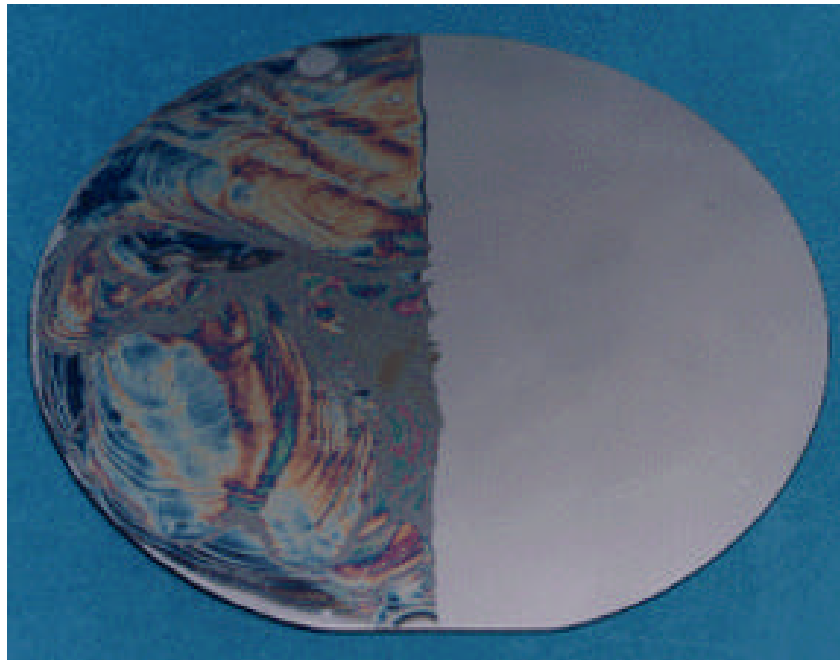




Satellite Contamination and Materials Outgassing Effects Database

E8



Objective

This task will input the ground/flight data (accumulated from the ASTM E1559 and space QCM flight databases as well as the MSX satellite mission) into separate, linked databases using a user friendly database platform, compatible with SEE Program requirements. This effort will be an example of cross-cutting technology by benefiting the space and planetary, Earth science, and commercial remote sensing mission areas.

Why Needed

The accumulation of contaminants (molecular and particulate) on spacecraft surfaces can present a serious threat to the desired performance of spacecraft systems, including optical, thermal, and attitude control. Many spacecraft missions have been jeopardized by contamination accumulations. If an thermal control system is contaminated by either molecules or particles, the thermal properties may be changed. As a result, the spacecraft or instruments may be incapable of maintaining proper temperature control. Similarly, if an optical system is contaminated, it may result in serious mission performance problems such as improper data acquisition, reduction in throughput, or incorrect imaging.

Point of Contact

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Sponsor

NASA Space Environments and Effects (SEE) Program